

Product datasheet

Recombinant mouse Adiponectin protein ab50177

Overview

Product name	Recombinant mouse Adiponectin protein
Protein length	Protein fragment

Description

Nature	Recombinant
Source	Escherichia coli

Amino Acid Sequence

Species	Mouse
Sequence	MKGEPGEAAYMYRSAFSVGL ETRVTVPNVP IRFTKIFYNQ QNHYDGSTGK FYCNIPLGLYY FSYHITVYMK DVKVSFLFKD KAVLFTYDQY QEKNVDQASG SVLLHLEVGD QVWLQVYGDG DHNGLYADNV NDSTFTGFL YHDTN
Amino acids	104 to 247

Specifications

Our [Abpromise guarantee](#) covers the use of **ab50177** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Biological activity	Biological Activity : Determined by its ability to inhibit the proliferation of murine myeloid cell lines M1. The ED ₅₀ for this effect is < 15 µg/ml.
Applications	SDS-PAGE Functional Studies
Endotoxin level	< 0.100 Eu/µg
Form	Lyophilised

Preparation and Storage

Stability and Storage	Shipped at 4°C. The lyophilized protein is stable for a few weeks at room temperature. Store at -20°C long term. This product is an active protein and may elicit a biological response in vivo, handle with caution.
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Reconstitution Reconstitute to 1mg/ml in sterile water.

General Info

Function Important adipokine involved in the control of fat metabolism and insulin sensitivity, with direct anti-diabetic, anti-atherogenic and anti-inflammatory activities. Stimulates AMPK phosphorylation and activation in the liver and the skeletal muscle, enhancing glucose utilization and fatty-acid combustion. Antagonizes TNF-alpha by negatively regulating its expression in various tissues such as liver and macrophages, and also by counteracting its effects. Inhibits endothelial NF-kappa-B signaling through a cAMP-dependent pathway. May play a role in cell growth, angiogenesis and tissue remodeling by binding and sequestering various growth factors with distinct binding affinities, depending on the type of complex, LMW, MMW or HMW.

Tissue specificity Synthesized exclusively by adipocytes and secreted into plasma.

Involvement in disease Defects in ADIPOQ are the cause of adiponectin deficiency (ADPND) [MIM:612556]. ADPND results in very low concentrations of plasma adiponectin. Genetic variations in ADIPOQ are associated with non-insulin-dependent diabetes mellitus (NIDDM) [MIM:125853]; also known as diabetes mellitus type 2. NIDDM is characterized by an autosomal dominant mode of inheritance, onset during adulthood and insulin resistance.

Sequence similarities Contains 1 C1q domain.
Contains 1 collagen-like domain.

Domain The C1q domain is commonly called the globular domain.

Post-translational modifications Hydroxylated Lys-33 was not identified in PubMed:16497731, probably due to poor representation of the N-terminal peptide in mass fingerprinting. HMW complexes are more extensively glycosylated than smaller oligomers. Hydroxylation and glycosylation of the lysine residues within the collagen-like domain of adiponectin seem to be critically involved in regulating the formation and/or secretion of HMW complexes and consequently contribute to the insulin-sensitizing activity of adiponectin in hepatocytes. O-glycosylated. Not N-glycosylated. O-linked glycans on hydroxylysines consist of Glc-Gal disaccharides bound to the oxygen atom of post-translationally added hydroxyl groups. Sialylated to varying degrees depending on tissue. Thr-22 appears to be the major site of sialylation. Higher sialylation found in SGBS adipocytes than in HEK fibroblasts. Sialylation is not required neither for heterodimerization nor for secretion. Not sialylated on the glycosylated hydroxylysines. Desialylated forms are rapidly cleared from the circulation.

Cellular localization Secreted.

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